

# Arizona State Retirement System Board



## Global Tactical Asset Allocation

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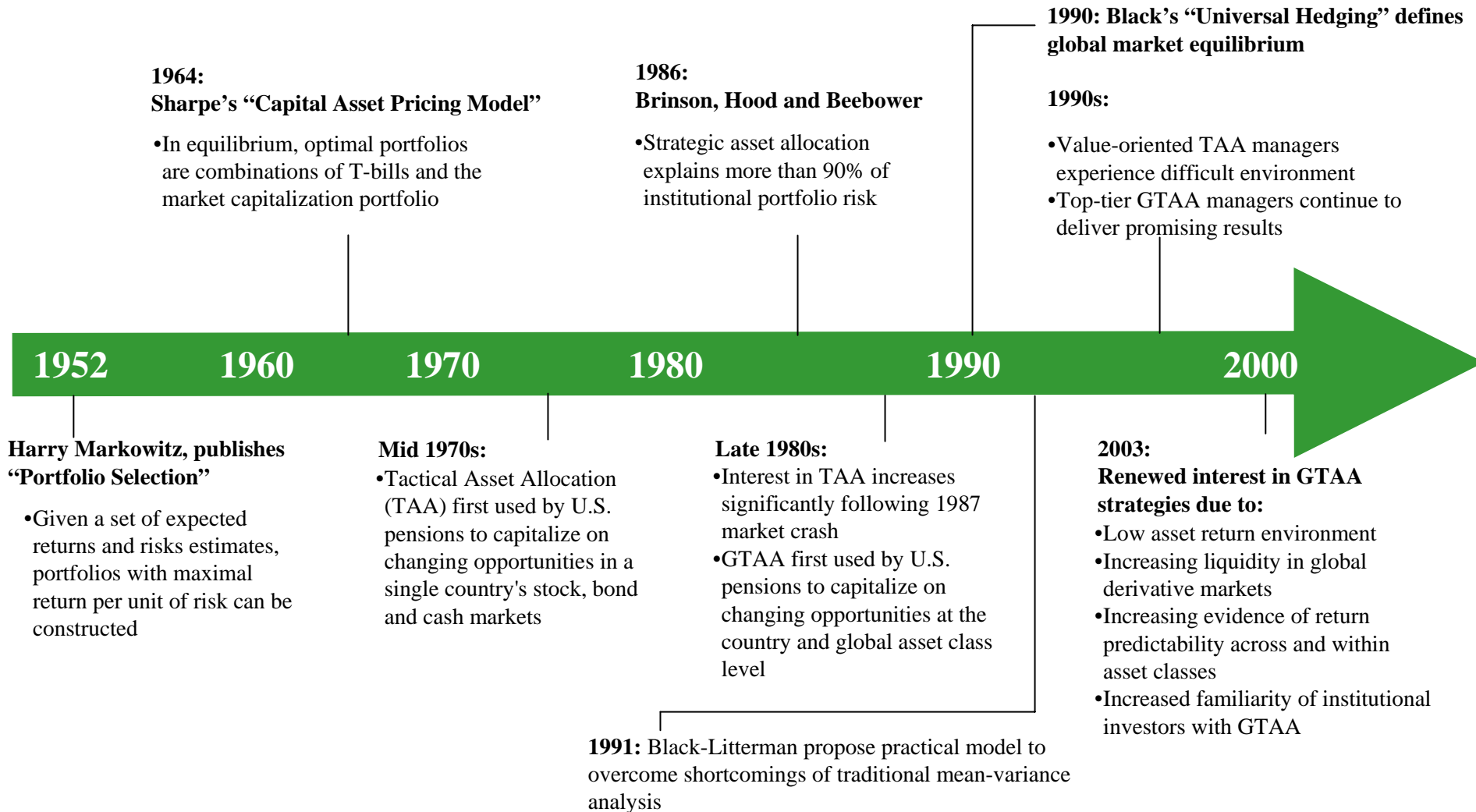
# Agenda

- Asset allocation approaches (strategic v. tactical)
- Evolution of the ASRS tactical asset allocation program
- ASRS global tactical asset allocation (GTAA) asset class overview
- ASRS GTAA manager reviews
- GTAA program oversight

# Asset Allocation Approaches

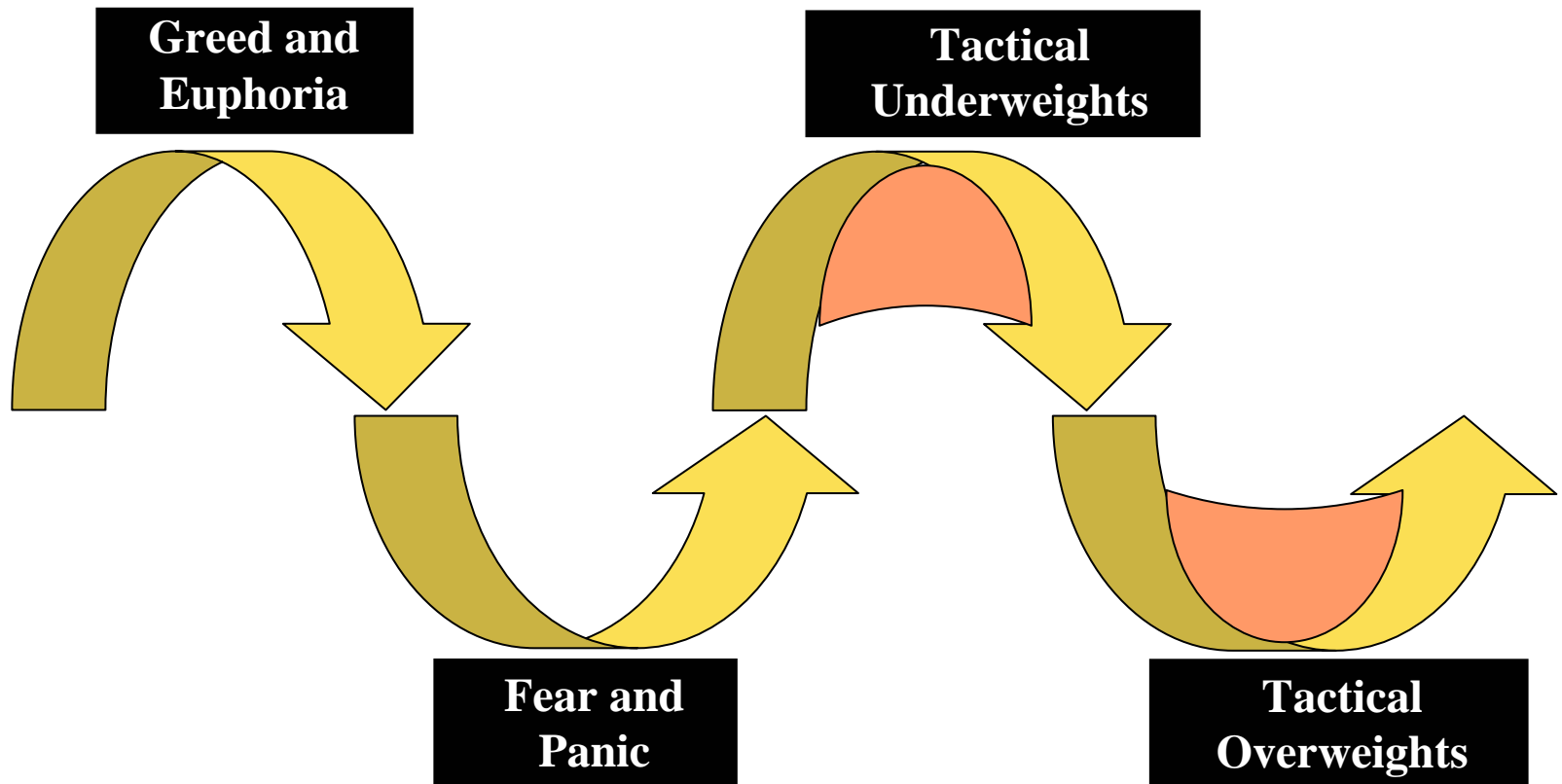
- Strategic Asset Allocation (SAA)
  - A long-term dedicated investment policy using asset classes and their respective total fund weightings consistent with a prescribed risk/return profile
- Tactical Asset Allocation (TAA)
  - A tactical approach to asset allocation that allows for opportunistic moves between various asset classes in an attempt to provide additional return by taking advantage of changing market conditions

# HISTORY OF ASSET ALLOCATION



# Tactical Asset Allocation

## Market Cycle and Investor Psychology



# Evolution of ASRS's Tactical Asset Allocation Program

- In March 1984, the ASRS's domestic TAA account was started and invested in a Barclays Global Investors static mix portfolio 60% equities / 40% fixed income.
- IMD/Mercer recommended that the mandate be broadened from a domestic TAA strategy to a global TAA (GTAA) strategy.
  - GTAA seeks to add value through asset allocation (US Equity, Non-US Equity, US Fixed Income, and Non-US Fixed Income), country selection (equity and fixed income) and currency selection.
- Following an extensive GTAA manager search in 2003, the Board approved the IC recommendation to hire Goldman Sachs Asset Management and Bridgewater Associates as ASRS GTAA managers.

# ASRS Global Tactical Asset Allocation

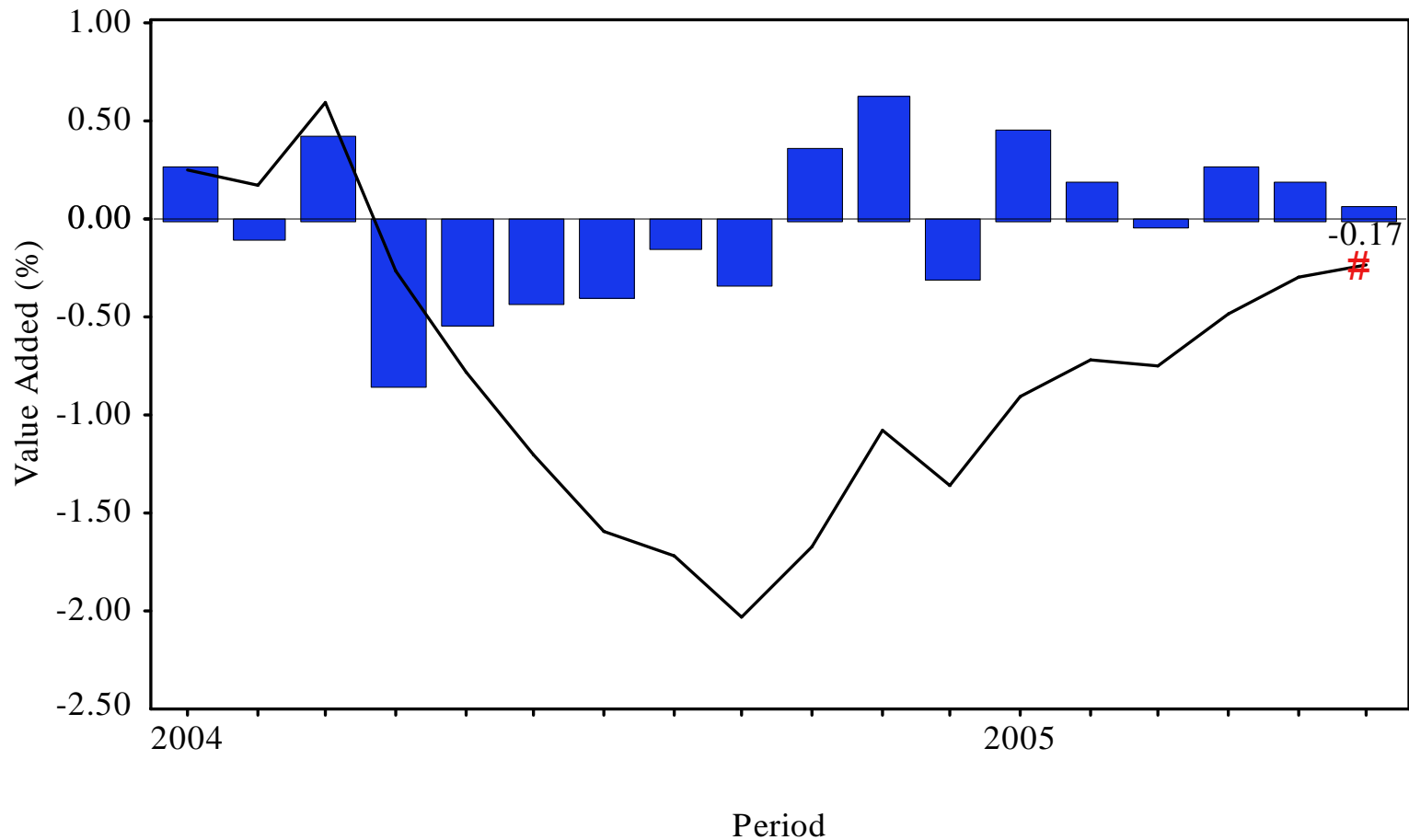
## Asset Class Overview

- Investment Managers:
  - Bridgewater Associates
  - Goldman Sachs Asset Management
- Inception:
  - December 31, 2003
- Benchmark:
  - S&P 56%, MSCI EAFE 16%, Lehman Aggregate 28%
    - ASRS's Total Fund benchmark with 6% real estate prorated
- Target Percent: 10%  $\pm$ 2%
- Asset Class Size:
  - \$2.4 billion, or 10.6% of the Total Fund (as of 9/30/05)

# ASRS GTAA Managers Composite

## Excess Returns

For period ending June 30, 2005



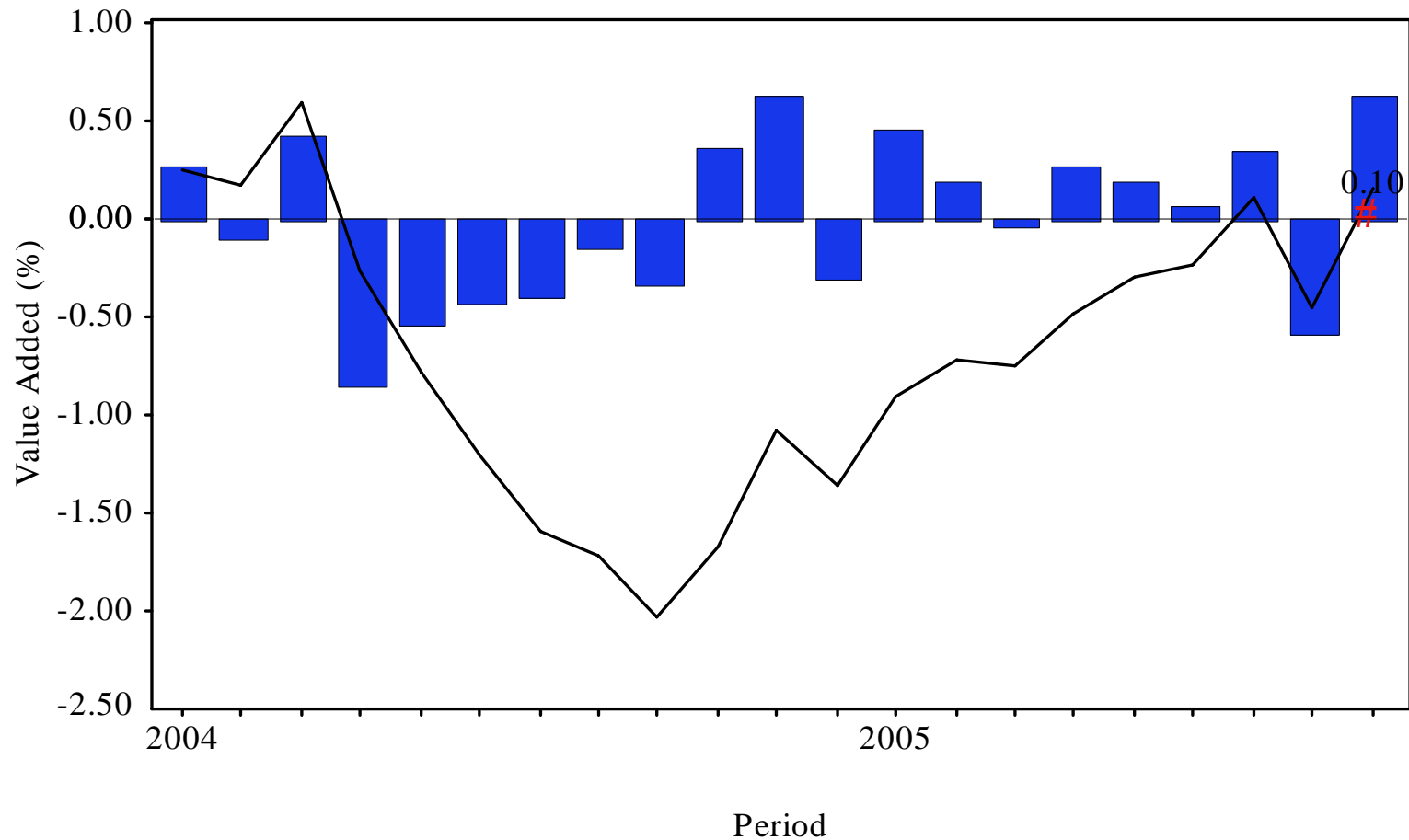
Annualized since 1-2004      Cumulative Value Added      Value Added



# ASRS GTAA Managers Composite

## Excess Returns\*

For period ending September 30, 2005



Annualized since 1-2004

Cumulative Value Added

Value Added

\*Preliminary

# Bridgewater

## Background

Location	Westport, Connecticut
Year founded	1975
Type of firm	Independent
Ownership	Employees (100%)
Firm-wide assets	\$128 billion
GTAA strategy assets	\$32 billion
ASRS account to strategy assets	3.7%
Strategy inception date	1989

As of June 30, 2005

# Bridgewater

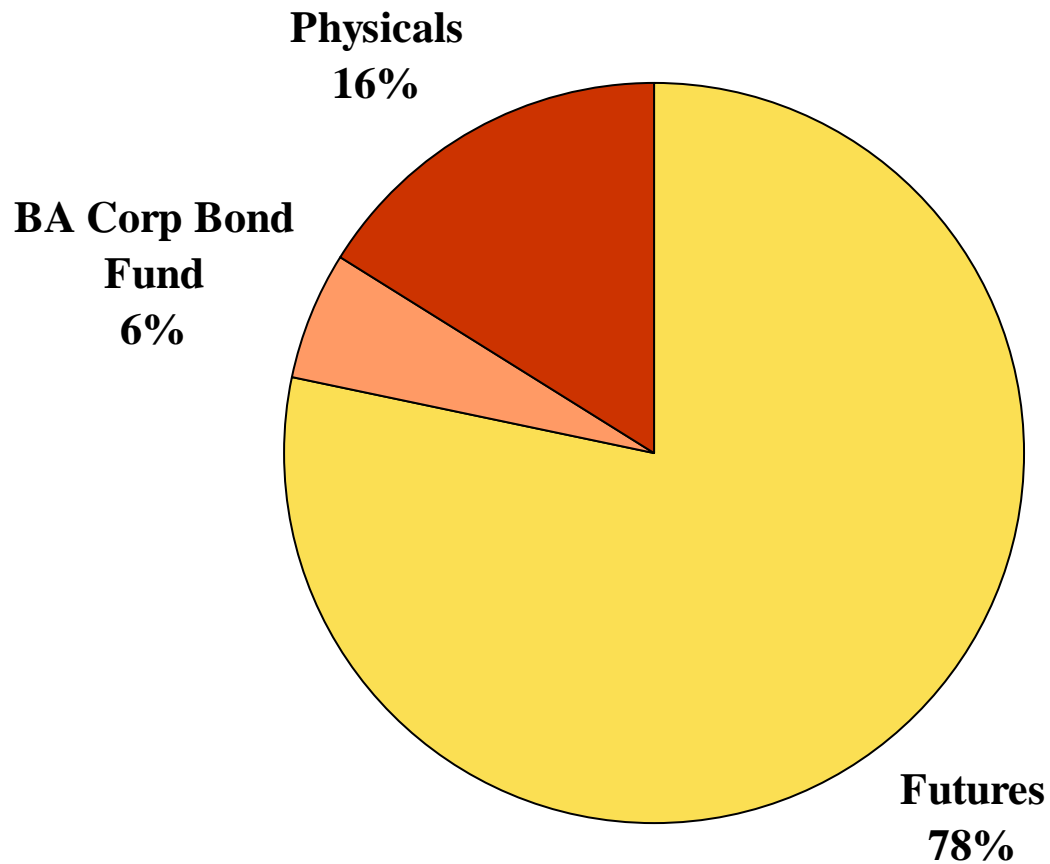
## Portfolio Profile

Portfolio size (as of 9/30/05)	\$1,232 million
Management fee	35 bp
Expected excess return	3.00%
Portfolio structure (as of 9/30/05)	Futures (78%), Physicals (22%)
Investment process	Fundamental
Bridgewater believes that a deep understanding of the <u>fundamental determinates</u> of each country's interest rates, exchange rates, and equity markets is an essential prerequisite for adding value in global tactical asset allocation. Bridgewater also believes that a <u>systematic process</u> for quantifying this fundamental relationship and converting it into investment decisions is essential.	

As of September 30, 2005

# Bridgewater Associates

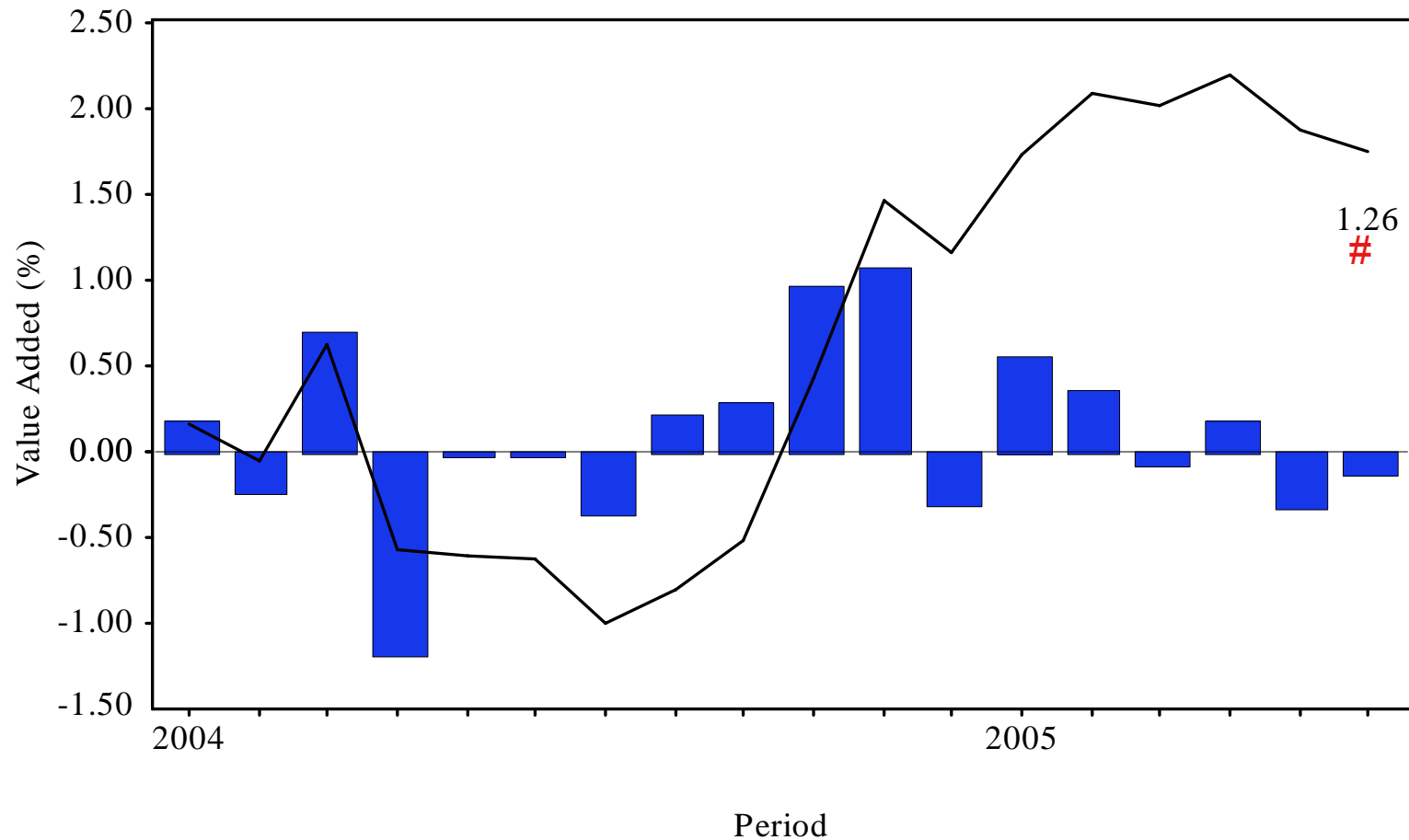
## Portfolio Structure



# Bridgewater

## Excess Returns

For period ending June 30, 2005



Annualized since 1-2004



Cumulative Value Added

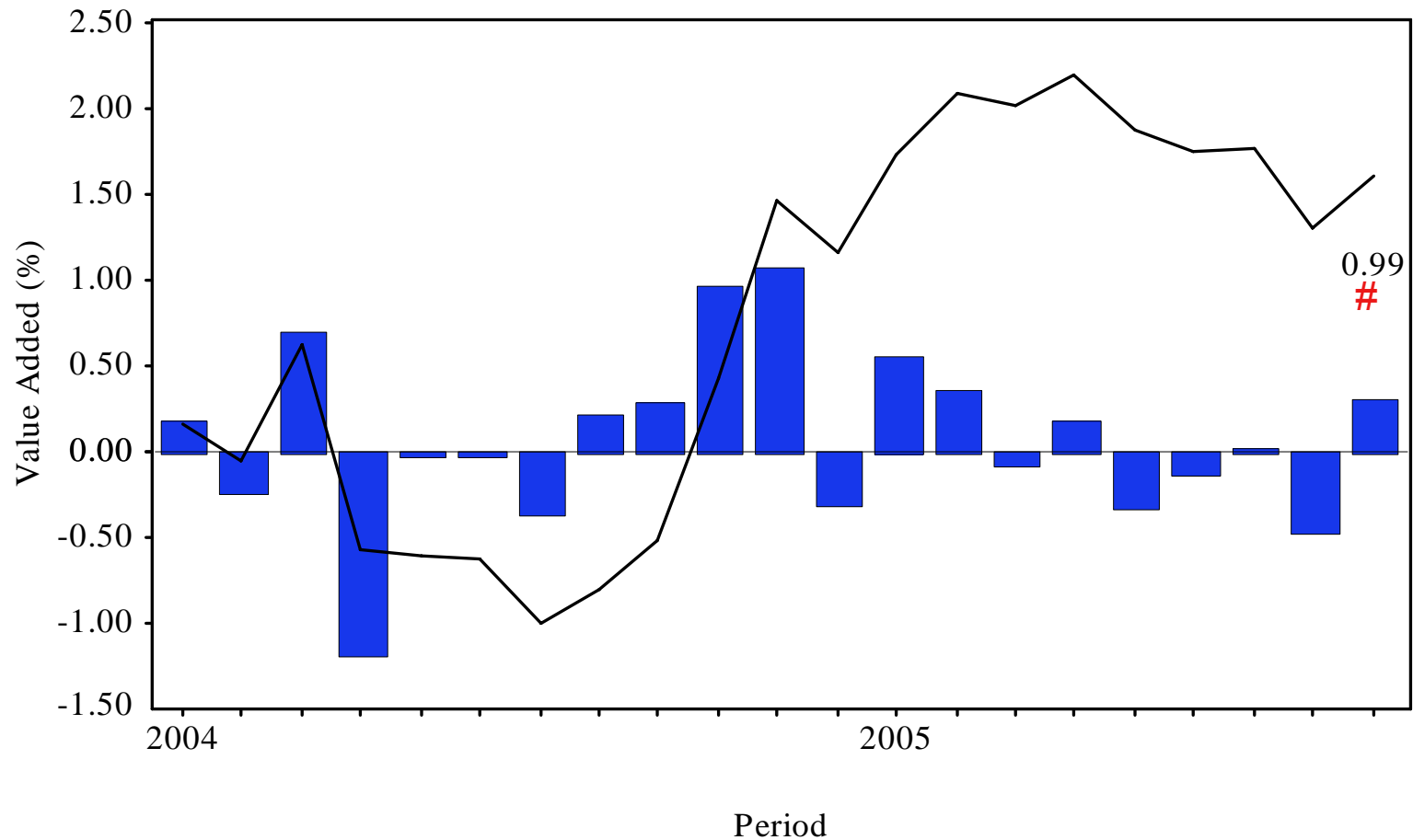


Value Added

# Bridgewater

## Excess Returns\*

For period ending September 30, 2005



Annualized since 1-2004      Cumulative Value Added      Value Added

\*Preliminary

# Bridgewater

## Performance Attribution

For period ending June 30, 2005

Strategy	Quarter	1 Year	3 Years	5 Years	Inception 12/31/03
Equity Country selection	20	30	---	---	18
Bond Country selection	-33	186	---	---	84
Currency selection	-4	80	---	---	59
Residual	0	0	---	---	0
Fees	-9	-35	---	---	-35
Excess return	-26	261	---	---	126

# Bridgewater

## Current Investment Views

### **Global Equities**

- Neutral on global equities.
- On a relative country basis, bullish on Australia and Japan and modestly bearish on Euroland and US equities.

### **Global Bonds**

- Moderately bearish on global bonds.
- On a relative country basis, underweight the US and Australia and overweight Japan and Canada.

### **Global Currencies**

- Continue to hold bearish USD and EUR positions and bullish JPY, AUD, and GBP positions.

### **Market Themes**

- The U.S. economy is approaching the late cycle in the context of high leverage and the end of secular disinflation.
- Japan and Europe are still struggling to expand while the U.K. and Australia have moved well into the late cycle.
- Emerging markets, particularly China, are exerting disinflationary pressure on global wages and inflationary pressure on commodity prices.
- Balance of payments imbalances are at an unprecedented extreme, creating pricing anomalies in the U.S. dollar, emerging market currencies, and global interest rates.



# Bridgewater

## Portfolio Risk Budget\*

Strategy	Risk Budget Allocation %
<b>Equity Country Selection:</b>	
Japan	1.6
Germany	1.4
Other	-0.8
Sub-total	<b>2.2</b>
<b>Bond Country Selection:</b>	
United States	57.4
Australia	16.3
Euroland	-6.2
Canada	-4.5
Other	-0.8
Sub-total	<b>62.2</b>
<b>Currency Selection:</b>	
Yen	18.5
Euro	14.5
Australian Dollar	4.3
Other	-1.7
Sub-total	<b>35.6</b>
<b>Total</b>	<b>100.0</b>

# Goldman Sachs

## Background

Location	New York, New York
Year founded	1988
Type of firm	Financial Conglomerate
Ownership	Goldman Sachs Company (51%) Public (49%)
Firm-wide assets	\$453 billion
GTAA strategy assets	\$31 billion
ASRS account to strategy assets	3.6%
Strategy inception date	1996

As of June 30, 2005

# Goldman Sachs

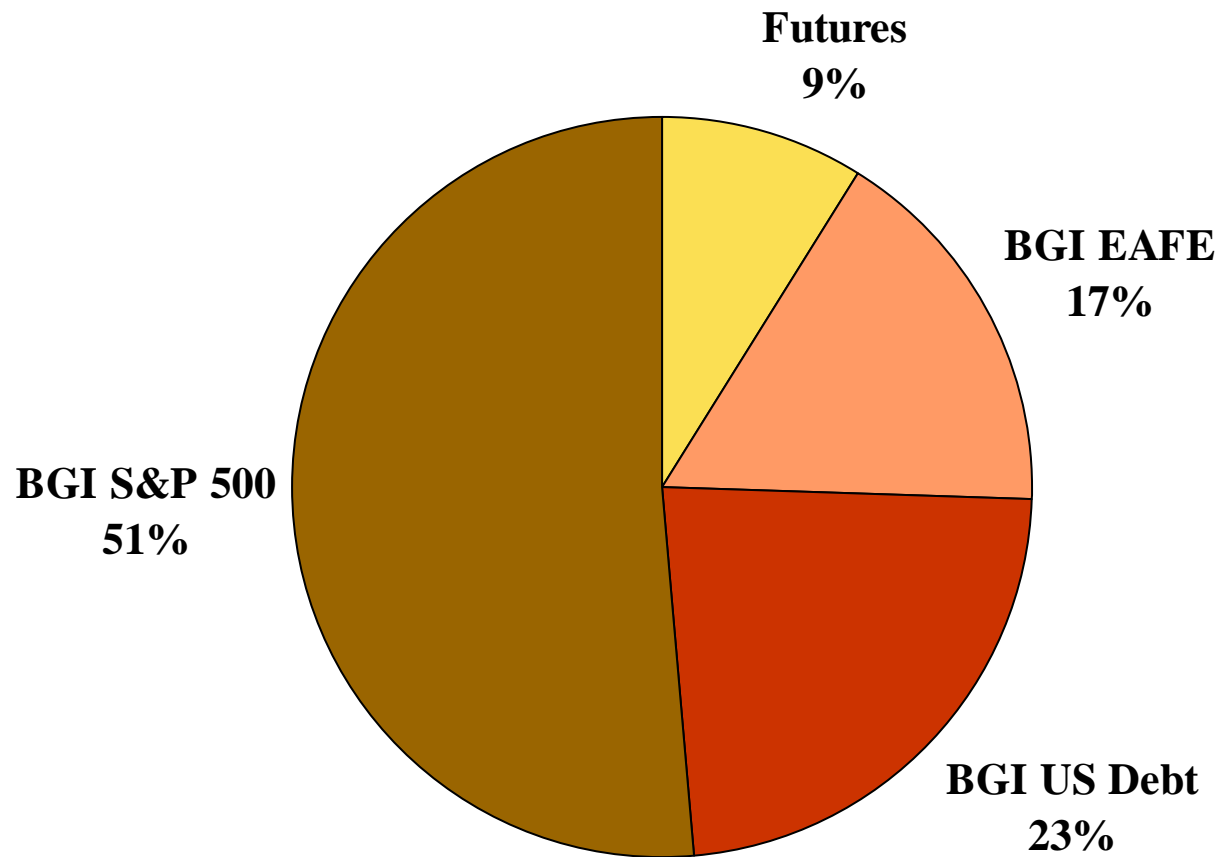
## Portfolio Profile

Portfolio size (as of 9/30/05)	\$1,193 million
Management fee	35 bp
Expected excess return	1.80%
Portfolio structure (as of 9/30/05)	Futures (9%), Physicals (91%)
Investment process	Quantitative

GSAM's Global Tactical Asset Allocation philosophy is based on a set of core beliefs:

1. Global securities markets exhibit predictable patterns. GSAM believes that markets are not perfectly efficient: valuations may drift away from fair value, investors may be slow to incorporate new information, structural barriers exist, risk premia change over time and some participants are not motivated solely by profit. GTAA is a disciplined quantitative approach designed to exploit changing market conditions and capture relative value across countries and asset classes.
2. The broader the opportunity set across markets and investment themes, the more value a skilled manager may add. In reducing risk and maximizing potential sources of returns, diversification within each GTAA strategy, or the allocation of risk across investment themes (valuation, momentum, fund flows, risk premia, macro), is just as important as diversification across asset classes and markets. No one theme or forecast variable drives the investment process.
3. Models should be transparent and based on sound economic principles.

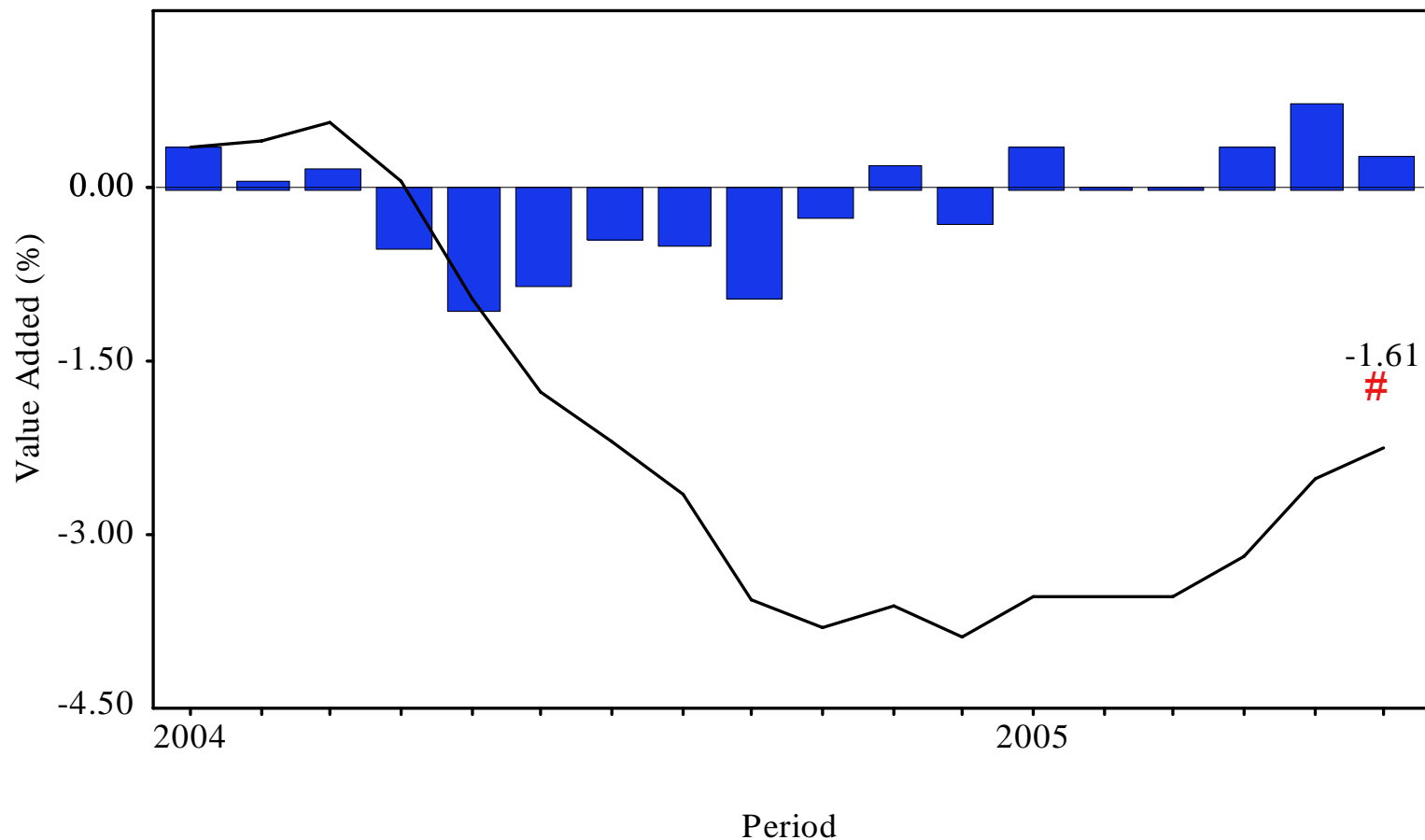
# Goldman Sachs Portfolio Structure



# Goldman Sachs

## Excess Returns

For period ending June 30, 2005

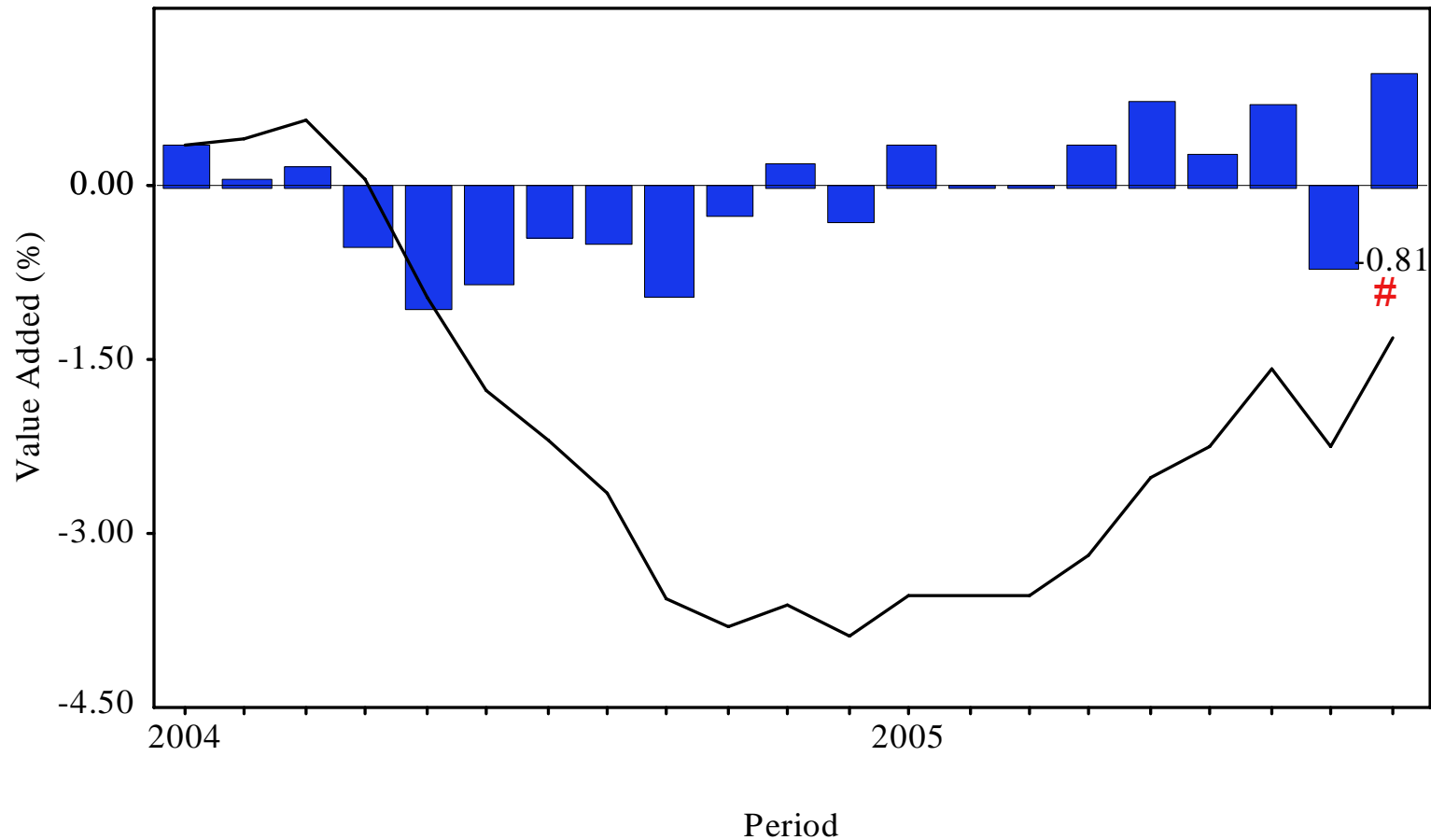


■ Annualized since 1-2004      ■ Cumulative Value Added      ■ Value Added

# Goldman Sachs

## Excess Returns\*

For period ending September 30, 2005



Annualized since 1-2004



Cumulative Value Added



Value Added

\*Preliminary

# Goldman Sachs

## Performance Attribution

For period ending June 30, 2005

Strategy	Quarter	1 Year	3 Years	5 Years	Inception 12/31/03
Equity Country selection	23	-26	---	---	-47
Bond Country selection	4	-15	---	---	16
Currency selection	73	-82	---	---	-142
Asset Class Timing	31	92	---	---	48
Sector Timing	13	11	---	---	1
Residual	2	3	---	---	-2
Fees	-9	-35	---	---	-35
Excess return	137	-52	---	---	-161

# Goldman Sachs

## Current Investment Views

### **Equity Country Selection**

- Among all regions most bullish on Japan and Europe ex UK, and to some extent Asia ex-Japan.
- The United Kingdom and North America appear less attractive.
- Despite weak momentum, Japan appears positive due to supportive macroeconomic conditions, high risk premiums and attractive valuations.

### **Fixed Income Country Selection**

- Favorite bond markets include Australia, Canada and Euroland.
- Japan, the UK and the US the least attractive bond markets globally.

### **Currency Selection**

- The Canadian and US dollars as well as the Norwegian krone are the favorite currencies globally.
- The Japanese yen and the Euro appear the least attractive globally.

### **Asset Class Timing and Sector Timing**

- Bullish on global stocks due to a favorable inflationary environment, strong growth prospects and attractive valuations.
- Despite modestly favorable momentum, Bearish on global bonds given unfavorable valuations.
- Negative on Small cap stocks relative to Large cap stocks as a result of less supportive macroeconomic conditions, poor risk premiums and weak sentiment.
- Negative on Technology versus Blue Chip stocks primarily as a result of unattractive relative valuations.



# Goldman Sachs

## Portfolio Risk Budget\*

Strategy	Risk Budget Allocation %
<b>Equity Country Selection:</b>	
Japan	19.6
Netherlands	14.4
France	10.0
EuroStoxx 50	-22.5
Other	2.5
Sub-total	<b>24.0</b>
<b>Bond Country Selection:</b>	
United Kingdom	4.3
United States	3.3
Other	-2.3
Sub-total	<b>5.3</b>
<b>Currency Selection:</b>	
Euro	24.5
Yen	21.3
Swedish Krona	13.9
Swiss Franc	12.6
Norwegian Krone	-17.3
United Kingdom	8.5
Other	-1.1
Sub-total	<b>62.4</b>
<b>Asset Class Timing</b>	8.0
<b>Sector Timing</b>	0.3
Sub-total	<b>8.3</b>
<b>Total</b>	<b>100.0</b>

# GTAA program oversight

- IMD activities
  - Conference calls with managers monthly
  - IMD risk management report
  - Reconciliation of portfolio holdings and returns
- Compliance statements
  - GTAA portfolios are in compliance with Arizona statute and the portfolio guidelines as outlined in the managers' Letters of Direction and Clarification.
  - There have been no compliance issues for the GTAA portfolios since inception.

# Constraints

Type of Exposure (dollar terms)	Policy Limit	Goldman Sachs		Bridgewater	
		Weight	Compliance	Weight	Compliance
<b><u>Equity Limits</u></b>					
Individual non-U.S. Developed Mkts	BM $\pm 15\%$	---	Yes	---	Yes
International Equity	0% - 50%	25.2%	Yes	16.8%	Yes
U.S. Equity	0% - 70%	54.4%	Yes	56.4%	Yes
Total Equities	0% - 100%	79.6%	Yes	73.2%	Yes
<b><u>Fixed Income Limits</u></b>					
Individual non-U.S. Developed Mkts	$\pm 15\%$	---	Yes	---	Yes
Total non-U.S. Developed Mkts	0% - 50%	2.0%	Yes	16.5%	Yes
U.S. Fixed Income	0% - 60%	18.2%	Yes	1.2%	Yes
<b><u>Cash Limit</u></b>	$\leq 10\%$	0.2%	Yes	9.1%	Yes
Total Fixed Income&Cash	0% - 60%	20.4%	Yes	26.8%	Yes
<b><u>Currency Limits</u></b>					
Individual non-U.S. (developed)	BM $\pm 15\%$	---	Yes	---	Yes
Total non-U.S. (developed)	0% - 50%	6.7%	Yes	22.5%	Yes
U.S. Dollar	50% - 100%	93.3%	Yes	77.5%	Yes

As of September 30, 2005

- ASRS Real Estate Asset Class